

Amendment and Response

Applicant: Yifeng Wu et al.

Serial No.: 10/825,452

Filed: April 15, 2004

Docket No.: 200312575-1

Title: IMAGE PROCESSING SYSTEM AND METHOD

REMARKS

The following remarks are made in response to the Office Action mailed April 30, 2008. Claims 1-39 were rejected. With this Response, claim 1 has been amended. Claims 1-39 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1, 3, 13, 16-18, 19, 29, and 31 under 35 U.S.C. § 103(a) as being unpatentable over the Oyumi U.S. Patent No. 7,301,677 in combination with the Enomoto U.S. Patent No. 7,304,761. The Examiner rejected claims 2, 14, 15, 20, 28, 30, and 39 under 35 U.S.C. § 103(a) as being unpatentable over the Oyumi U.S. Patent No. 7,301,677 and the Enomoto U.S. Patent No. 7,304,761, and further in view of the Enomoto U.S. Patent No. 7,304,761. The Examiner rejected claims 4-8, 12, 21-23, 27, 32-34, and 38 under 35 U.S.C. § 103(a) as being unpatentable over the Oyumi U.S. Patent No. 7,301,677 and the Enomoto U.S. Patent No. 7,304,761, and further in view of the Neubauer et al. U.S. Patent No. 7,110,591. The Examiner rejected claims 9-11, 24-26, and 35-37 under 35 U.S.C. § 103(a) as being unpatentable over the Oyumi U.S. Patent No. 7,301,677, the Enomoto U.S. Patent No. 7,304,761 and the Enomoto U.S. Patent No. 7,304,761, and further in view of the Stearns U.S. Patent No. 6,714,677. Applicant respectfully disagrees that the art of record teaches or suggests the claims.

Independent Claim 1

Independent claim 1, as stated above, was rejected under 35 U.S.C. § 103(a) by the combination of Oyumi and Enomoto. Claim 1 was amended to recite, “classify the images into classes based on the comparison of the histograms....” Support for this language can be found in at least the following locations page 9, lines 13-21 and figure 2.

Applicant respectfully disagrees with the Office Action’s suggestion that Oyumi and Enomoto together include all of the elements of claim 1. In fact, the Office Action explicitly acknowledges that Oyumi `677 fails to teach or suggest *determining a similarity of the images in the print job by comparing the calculated histograms; classifying the images into classes based on the comparison of the histograms; and sending each of the classes of images to a respective one of the printing units.* Office Action, page 3. In an attempt to

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cure the deficiencies of Oyumi, the Office Action combines Oyumi with Enomoto. But, Enomoto similarly fails to teach these features.

Enomoto is a method directed towards storing image processing-related data of an image so that, if a reprint is needed, the original image can be recreated by retrieval of the image processing-related data. Enomoto, col. 3, lines 19-25. A density histogram assists in this method by setting the reading condition for the fine scan and facilitating image adjustment. There is not, however, any teaching or suggestion of determining a similarity of images in a print job by comparing calculated histograms; classifying images into classes based on a comparison of histograms; or sending each of the classes of images to a respective printing unit.

In the Office Action, the Examiner relies on the language cited at column 10, line 63 - column 11, line 5 of the Enomoto reference asserting it teaches classifying the images into classes based on a comparison. In fact, in that section, the Enomoto reference teaches calculating a density histogram from pre-scan data so as to prepare for fine scanning the image. Enomoto provides:

from the pre-[scan data], the setup subsection 70 produces a density histogram ... so as to set the reading conditions for fine scan. Furthermore, the setup subsection 70 determines the image adjustment to be executed from various image processing operations and the order of execution in accordance with the density histogram.... Enomoto, col. 10, line 64-col. 11, line 9. (Emphasis added).

The density histogram affects the image adjustment to be executed from various image processing operations. Nothing in the Enomoto reference teaches or suggests *determining a similarity of the images* in the print job by comparing the calculated histograms. There is no teaching of a comparison, much less making a determination of similarity based on the comparison.

The Examiner relies on this same section to assert that the Enomoto reference teaches classifying images into classes based on a comparison of histograms. The section, however, does not teach classifying images, and as indicated, there is no teaching of comparison of the histograms. As such, this feature is likewise not taught or suggested.

Finally, in the Office Action the Examiner asserts that Enomoto teaches sending each of the classes of images to a respective one of the printing units. As discussed above,

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however, there are no classes of images taught or suggested in the Enomoto reference. As such, it is impossible to send a class to a respective printer.

The Office Action quotes Enomoto at col. 11, lines 30-35 for the proposition that classes of images are sent to a respective one of the printing units. Enomoto teaches:

In the printing with film processing, the parameter integration subsection 76 ***transmits the image processing information of the frame of interest*** and the calculated image characteristic quantity and the like received from the setup subsection 70 ***to the recording means*** 78 after processing for the frame is determined. Enomoto, col. 11, lines 30-35. (Emphasis added).

As can be seen above from the quoted language, Enomoto does not teach or suggest sending classes of images to a respective one of the printing units. This language in Enomoto is directed towards transmitting image processing information to a recording means to be stored for later retrieval.

Because the art of record fails to teach or suggest ***determining a similarity of the images*** in the print job ***by comparing the calculated histograms; classifying the images*** into classes ***based on the comparison*** of the histograms; or ***sending*** each of the classes of images ***to a respective one of the printing units***, claim 1 and its dependant claims are allowable over the art of record. It is therefore respectfully submitted that independent claim 1 is in condition for allowance as are claims 2-18 depending there from.

Independent Claim 19

Independent method claim 19, as stated above, was rejected under 35 U.S.C. § 103(a) by the combination of Oyumi and Enomoto. The Office Action acknowledges that:

Oyumi '677 does not expressly disclose comparing the histograms of the images in the print job to determine similarity between the images; grouping the images into groups based on the similarity of the comparisons of the histograms; sorting the images in the groups into classes, including at least a first class and a second class; and sending the images to the printing units for printing, including sending the images from the first class to the first printing unit and sending the images from the second class to the second printing unit. Office Action, page 8.

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In an attempt to cure the deficiencies of Oyumi the Office Action combines Oyumi with Enomoto. The Office Action on pages 8 and 9 uses the same language from Enomoto to reject claim 19 as was used to reject claim 1. As discussed above, with respect to claim 1 the language referred to in Enomoto does not teach what the Office Action asserts. Enomoto teaches a method directed towards storing image processing-related data of an image so that if a reprint is needed the original image can be recreated by retrieval of the image processing-related data. Enomoto does not teach comparing histograms, grouping images, sorting images into classes or sending different classes to different printers.

It is therefore respectfully submitted that independent claim 19 is in condition for allowance as are claims 20-28 depending there from.

Independent Claim 29

Independent system claim 29, as stated above, was rejected under 35 U.S.C. § 103(a) by the combination of Oyumi and Enomoto. The Office Action acknowledged that, “Oyumi ’677 does not expressly disclose comparing the calculated histograms and determining a similarity of the images in the print job; classifying the images into classes based on the comparison; and sending each of the classes of images to a respective one of the printing units.” In an attempt to cure the deficiencies of Oyumi the Office Action combines Oyumi with Enomoto. The Office Action on pages 12 and 13 uses the same language from Enomoto to reject claim 29 as was used to reject claim 1. As discussed above, with respect to claim 1 the language referred to in Enomoto does not teach what the Office Action asserts. Enomoto teaches a method directed towards storing image processing-related data of an image so that if a reprint is needed the original image can be recreated by retrieval of the image processing-related data. Enomoto does not teach determining a similarity of the images in the print job, classifying the images into classes based on the comparison and sending each of the classes of images to a respective one of the printing units.

It is therefore respectfully submitted that independent claim 29 is in condition for allowance as are claims 30-39 depending there from.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-39 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-39 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to either Paul P. Kempf at Telephone No. (612) 767-2502, Facsimile No. (612) 573-2005 or Guillaume Durville at Telephone No. (34 93) 582-2232, Facsimile No. (34 93) 582-2373. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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